

METHOD FOR CALIBRATING A VOLUMETRIC FLOW METER HAVING AN ARRAY OF SENSORS

CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

5 This application claims benefit to U.S. provisional patent application serial no. 60/428,312, filed November 22, 2002 (CC-0556); U.S. provisional patent application serial no. 60/510,765, filed October 9, 2003 (CC-0662); and U.S. provisional patent application serial no. 60/511,399, filed October 13, 2003 (CC-0665), which are all hereby incorporated by reference in their entirety.

BACKGROUND OF THE INVENTION

1. Field of the Invention

10 The present invention relates to flow meters; and more particularly to a method and apparatus for calibrating a flow meter having an array of sensors arranged in relation to a pipe that measures a flow rate of a fluid flowing in the pipe.

2. Description of the Related Art

20 Volumetric flow measurement plays a critical role in process optimization and control of most industrial processes. The current industrial flow measurement market is often segmented into two broad technology categories: old technology and new technology flow meters. Old technology flow meters include flow measurement technologies that have been in used for greater than 70 years and include turbine meters, orifice plates and variable area flow meters. The new technology flow meters have emerged over the last 30~50 years and offer advantages over the old technologies in performance, functionality, and reliability. The major types of new technology flow meters include ultrasonic meters, electromagnetic flow meters, 25 vortex flow meters, and coriolis flow meters. Each type has evolved to serve various aspects of the diverse range of applications within the industrial flow meter landscape. For example, the electromagnetic flow meter has emerged as the dominate type of flow meter used in the paper and pulp industry.